

# SAC-4P-M12MS/ 2,0-500/FS-2L BK - Sensor/actuator cable



1400539  
<https://www.phoenixcontact.com/us/products/1400539>

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Sensor/actuator cable, 4-position, PVC, gray RAL 7001, Plug straight M12, coding: A, with 2 LEDs, on Socket straight M12, coding: A, with 2 LEDs, cable length: 2 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1400539       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 50 pc         |
| Product key                          | AF1CCA        |
| GTIN                                 | 4046356500036 |
| Weight per piece (including packing) | 100.7 g       |
| Weight per piece (excluding packing) | 98.4 g        |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 4                     |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | A                     |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Material specifications

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | HB                                          |
| Seal material                          | NBR                                         |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Contact material                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material for screw connection          | Zinc die-cast, nickel-plated                |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 24 V AC                    |
|                       | 24 V DC                    |
| Nominal current $I_N$ | 4 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

|                        |        |
|------------------------|--------|
| Status display         | 2 LEDs |
| Status display present | yes    |

### Connector

#### Connection 1

|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 4                 |
| Coding type         | A                 |

#### Connection 2

|      |                     |
|------|---------------------|
| Type | Socket straight M12 |
|------|---------------------|

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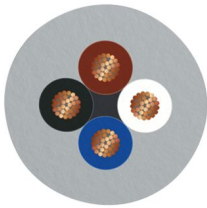
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|                     |   |
|---------------------|---|
| Number of positions | 4 |
| Coding type         | A |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

## PVC gray [500]

|                                               |                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |               |
| Cable weight                                  | 40 kg/km                                                                                        |
| UL AWM Style                                  | 2464 / 1729 (80°C/300 V)                                                                        |
| Number of positions                           | 4                                                                                               |
| Shielded                                      | no                                                                                              |
| Cable type                                    | PVC gray [500]                                                                                  |
| Conductor structure signal line               | 19x 0.15 mm                                                                                     |
| AWG signal line                               | 22                                                                                              |
| Conductor cross section                       | 4x 0.34 mm² (Signal line)                                                                       |
| Wire diameter incl. insulation                | 1.26 mm ±0.05 mm                                                                                |
| External cable diameter                       | 4.70 mm ±0.15 mm                                                                                |
| Outer sheath, material                        | PVC                                                                                             |
| External sheath, color                        | gray RAL 7001                                                                                   |
| Conductor material                            | Bare Cu litz wires                                                                              |
| Material wire insulation                      | PVC                                                                                             |
| Single wire, color                            | brown, white, blue, black                                                                       |
| Thickness, insulation                         | ≥ 0.23 mm (Core insulation)                                                                     |
| Thickness, outer sheath                       | ≥ 0.76 mm                                                                                       |
| Overall twist                                 | 4 wires, twisted                                                                                |
| Max. conductor resistance                     | max. 57 Ω/km (at 20 °C)                                                                         |
| Insulation resistance                         | ≥ 200 MΩ*km (at 20 °C)                                                                          |
| Nominal voltage, cable                        | ≤ 300 V                                                                                         |
| Test voltage                                  | ≥ 3000 V                                                                                        |
| Minimum bending radius, fixed installation    | 5 x D                                                                                           |
| Minimum bending radius, flexible installation | 10 x D                                                                                          |
| Smallest bending radius, fixed installation   | 24 mm                                                                                           |
| Smallest bending radius, movable installation | 47 mm                                                                                           |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)<br>-25 °C ... 80 °C (Cable, flexible installation) |

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## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Degree of protection            | IP65                                           |
|                                 | IP67                                           |
|                                 | IP68                                           |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket)               |
|                                 | -40 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (Cable, flexible installation) |

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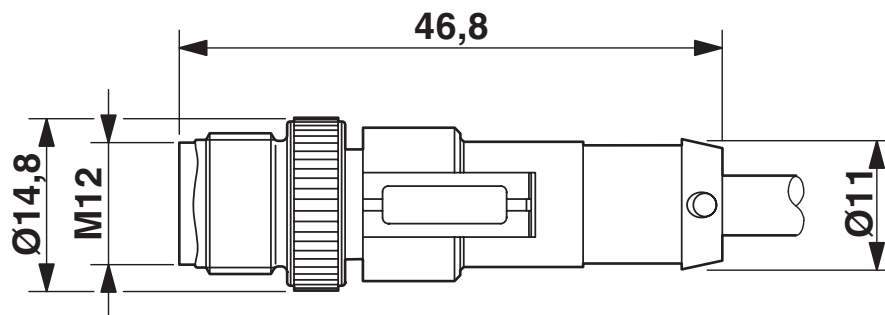


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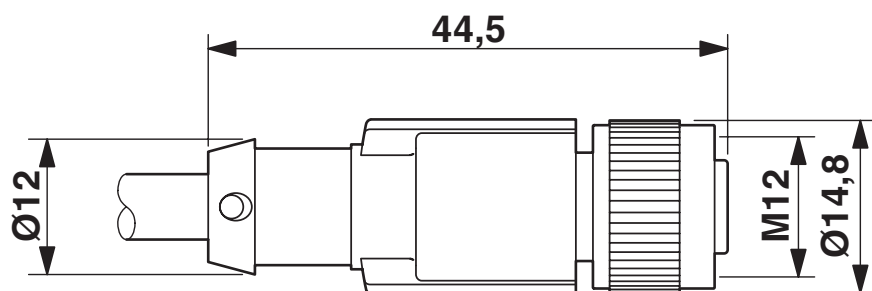
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



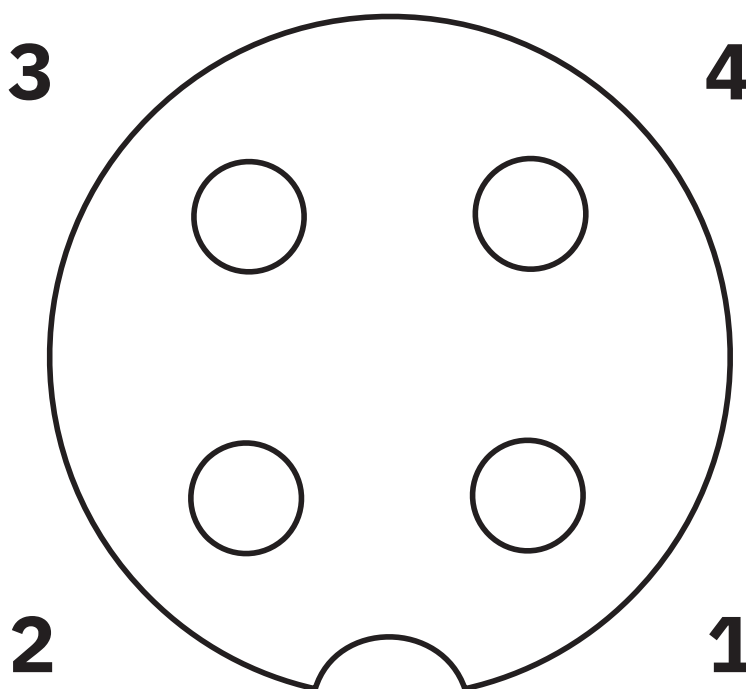
Socket M12 x 1, straight, with LED

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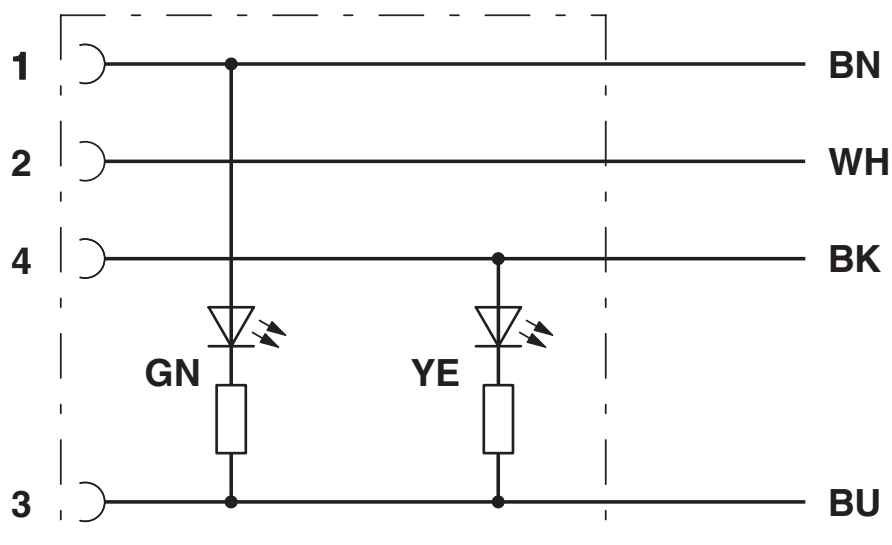
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Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

Circuit diagram



Contact assignment of M8/M12 socket with LED

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

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## Environmental product compliance

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| China RoHS                             |                                                                                                                                                                                                                                   |
| Environment friendly use period (EFUP) | EFUP-50                                                                                                                                                                                                                           |
|                                        | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC                          |                                                                                                                                                                                                                                   |
| REACH candidate substance (CAS No.)    | No substance above 0.1 wt%                                                                                                                                                                                                        |

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